

Linzer biol. Beitr.	39/2	1233-1237	18.12.2007
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The final instar larvae of *Gynacantha rosenbergi* KAUP and *Antipodogomphus proselythus* (MARTIN) (Odonata, Aeshnidae & Gomphidae)

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A b s t r a c t: The Australian dragonflies *Gynacantha rosenbergi* KAUP and *Antipodogomphus proselythus* (MARTIN) were bred out. Their larvae are described from final instar exuviae and compared with their closest allies. They were previously undescribed.

K e y w o r d s: *Gynacantha rosenbergi*, *Antipodogomphus proselythus*, larvae, Australia.

Introduction

In January 2007 Steve Butler (United Kingdom) left me some live odonate larvae he had collected in north-eastern Queensland.

Whereas most of them appeared rather weak and accordingly did not last long, a male and a female of *Gynacantha rosenbergi* KAUP and a female of *Antipodogomphus proselythus* (MARTIN) emerged a few months later. As the larvae of both these species are undescribed, they are introduced below.

***Gynacantha rosenbergi* KAUP (Figs 1, 2)**

FRASER (1963) pointed out that the larva TILLYARD (1916) had described as *G. rosenbergi* belonged to *G. dobsoni* FRASER, a statement agreed to by THEISCHINGER (2002). The following, therefore, is the first description of the larva of *G. rosenbergi*.

M a t e r i a l : 1 final instar male exuvia and 1 final instar female exuvia from larvae collected in a pond nr Deep Forest Lodge, Cape Tribulation, Queensland, Australia, 28.12.2006, S. Butler / adults emerged in Sydney, Grays Point, 28./29.3.2007, G. & C. Theischinger.

Total length 38.5-39.0 mm; width of head including eyes 8.0 mm; length of metafemur 5.9-6.2 mm; length of abdomen 26.8-27.2 mm. Prementum: length 6.1-6.2 mm; width at distal end 4.4-4.5 mm, at base 1.7-1.8 mm.

D i a g n o s i s : Prementum moderately slender, slightly petiolate, length/width ratio 1.38-1.40; ligula margins curved, a tiny tooth each side of, and very close to, median cleft. Labial palps with row of 6-7 long palpal setae and 2-3 short palpal setae; a few additional short setae irregularly spaced next to the short setae at the basis of the row.

Approximately right angle between angular prothoracic processes, the anterior process slightly forward directed and somewhat narrower than the posterior; notal lobes small, angulated. Distinct lateral spines on abdominal segments 6-9, a tiny indication of a spine on 5. Epiproct almost as long as paraprocts. Male cerci more than 95 %, basal projection less than 40 % length of epiproct. Female gonapophyses reaching to 2/3 length of segment 10; female cerci about 90 % length of paraprocts.

R e m a r k s : Apparently *G. rosenbergi* is the sister species of *G. dobsoni* FRASER. Accordingly the larva of *G. rosenbergi* is very similar to *G. dobsoni*. Even though the prementum of *G. rosenbergi* was found stouter (length/width ratio 1.38-1.40) and the number of long palpal setae was found greater (6-7) than is known of *G. dobsoni* (length/width ratio of prementum >1.50; 5 long palpal setae) it appears that more material is needed to establish if these differences are consistent.

***Antipodogomphus proselythus* (MARTIN) (Figs 3, 4)**

The known larvae of four species of *Antipodogomphus* were keyed by THEISCHINGER (1998, 2000). This together with the following description leaves only the larva of *A. edentulus* WATSON undescribed.

M a t e r i a l : 1 final instar female exuvia from larva collected in Isabella Creek, N of Cooktown, Cape York Peninsula, Queensland, Australia, 4.1.2007, S. Butler / adult emerged Sydney/Grays Point, 31.3.2007, G. & C. Theischinger.

Total length 27.2 mm; width of head including eyes 5.0 mm; length of metafemur 3.5 mm; length of abdomen 19.0 mm. Prementum: length 2.7 mm; width at distal end 2.5 mm, at base 1.8 mm.

Prementum only slightly longer than wide; ligula slightly protuberant, its margin finely crenulate. Labial palps subtriangular and almost straight, end hook slightly curved. Pro- and mesotibia with distal claw large. Lateral spines on abdominal segments 7 and 8. Mid-dorsal armature on segments 3-9. Segment 9 of abdomen 2.8 mm long.

R e m a r k s : The combination of almost straight labial palps, almost square prementum with slightly protruding ligula, strongly developed distal outer claws of pro- and mesotibia and short abdominal segment 9 appears to be diagnostic for the larva of *A. proselythus*.

Acknowledgements

Steve Butler is thanked for leaving me the above material for description, my wife Christine for doing the right thing when the dragonflies emerged during one of my field trips.

Zusammenfassung

Die bisher unbeschriebenen Larven von *Gynacantha rosenbergi* KAUP und *Antipodogomphus proselythus* (MARTIN) wurden nach Exuvien beschrieben.

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Figs 1, 2: *Gynacantha rosenbergi* KAUP, final instar exuviae: (1) male, dorsal; (2) female, ventral.



Figs 3, 4: *Antipodogomphus proselythus* (MARTIN), final instar female exuvia: (3) dorsal; (4) ventral.